

CONDUCTIVE-CARBON NANOTUBE(CNT)-BIOSENSOR USING CONDUCTIVE CNT DOTTED WITH METALS OR CONDUCTIVE CNT DOTTED WITH METALS WHERE BIORECEPTOR IS COMBINED AND PREPARATION METHOD THEREOF

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Abstract of **KR 20040107225 (A)**

PURPOSE: A conductive carbon nanotube(CNT)-biosensor by using a conductive CNT dotted with metals or a conductive CNT dotted with metals where bioreceptor is combined and a preparation method thereof are provided. The biosensor has large surface area, improved conductivity to increase the amount of immobilized biological molecules, and improved accuracy with a small amount of a sample.; **CONSTITUTION:** The conductive-carbon nanotube(CNT) biosensor has a bioreceptor which binds to or reacts with a target bio-material in metals scattering on the conductive CNT or a pattern of the conductive CNT, wherein the bioreceptor is enzyme substrate, ligand, amino acid, peptide, protein, nucleic acid, lipid, cofactor or carbohydrate; and the conductive CNT dotted with metals has a form of CNT-(CONH-R1-S-M)r in which M is metal, r is an integer of 1 or over, and R1 is C1-20 carbohydrate, unsaturated carbohydrate or aromatic organic group. The method for preparing the conductive CNT-biosensor comprises binding a conductive CNT-M-nucleic acid complex to a substrate with amine/lysine group on its surface through UV radiation.

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